



CITY OF ROANOKE, VIRGINIA
REQUEST FOR PROPOSAL
FOR
SOLAR SERVICES
RFP NUMBER 15-04-05
OPENING DATE: January 12, 2015
OPENING TIME 2:00 P.M.

The Request for Proposal and related documents may be obtained during normal business hours from the Purchasing Division located in the Noel C. Taylor Municipal Building, 215 Church Avenue, SW, Room 202, Roanoke, VA 24011, or from the City Vendor Self Service web site at <https://VSS.roanokeva.gov>.

**THIS PUBLIC BODY DOES NOT DISCRIMINATE
AGAINST FAITH-BASED ORGANIZATIONS**

Date of RFP: December 9, 2014

REQUEST FOR PROPOSAL (RFP)

RFP No. 15-04-05

Issue Date: December 9, 2014

Commodity Code: 29082, 98132, 90628, 93628, 69043, 69056, 94649,

Title: Solar Services

Issued By: **City of Roanoke**
Purchasing Division
Noel C. Taylor Municipal Building
215 Church Ave., SW, Room 202
Roanoke, VA 24011-1517
Phone: (540) 853-5246
Fax: (540) 853-1513
Email: simone.knowles@roanokeva.gov

Sealed proposals will be received on or before 2:00 P.M., January 12, 2015 for furnishing the services and/or items described herein. The time of receipt shall be determined by the time clock stamp in the Purchasing office.

All questions must be submitted before 5:00 p.m., January 5, 2015. If necessary, an addendum will be issued and posted to the City Vendor Self Service website at <https://VSS.roanokeva.gov> and to the City website at www.roanokeva.gov/purchasing ... Current Bid/RFP Requests.

If proposals are mailed, send directly to the Purchasing Division at the address listed above. If hand delivered, deliver to the Purchasing Division at Noel C. Taylor Municipal Building, 215 Church Ave., SW, Room 202, Roanoke, VA.

THIS PUBLIC BODY DOES NOT DISCRIMINATE AGAINST FAITH-BASED ORGANIZATIONS.

The City reserves the right to cancel this RFP and/or reject any or all proposals and to waive any informalities in any proposal.

This section is to be completed by the Offeror and this page must be returned with the proposal. In compliance with this request for proposal and subject to all terms and conditions imposed herein, which are hereby incorporated herein by reference, the undersigned offers and agrees to furnish the services and/or items requested in this solicitation if the undersigned is selected as the Successful Offeror. No proposal may be withdrawn for a period of sixty (60) days after the opening of the proposal, except as provided in the RFP.

Legal Name and Address of Firm (according to your registration with the SCC): REQUIRED

Date: _____

By: _____
(Signature in Ink)

Name: _____
(Please Print)

Zip: _____ Title: _____

Phone: _____ FAX: _____

Email: _____ Business License# _____

Virginia State Corporation Commission Identification Number: _____

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CITY OF ROANOKE, VIRGINIA
REQUEST FOR PROPOSAL
FOR
SOLAR SERVICES

RFP NO. 15-04-05

INTRODUCTION

The City of Roanoke, Virginia, is seeking competitive proposals from qualified Offerors to provide financing, building, ownership, operation and maintenance of solar power generation systems at multiple City selected locations in the City of Roanoke, in accordance with all terms, conditions and specifications as set out in this Request for Proposal (RFP). The RFP and related documents may be obtained during normal business hours from the Purchasing Division, (540) 853-2871, or from the City's Vendor Self Service web site at <https://VSS.roanokeva.gov>.

Proposals, to be considered and evaluated, must be sealed and received on or before 2:00 p.m. on Monday, January 12, 2015 in the Purchasing Division, City of Roanoke, Noel C. Taylor Municipal Building, 215 Church Ave., SW, Room 202, Roanoke, VA 24011. Proposals appropriately received will be opened at this time. **Proposals received after 2:00 p.m. will not be accepted or considered.** The time of receipt shall be determined by the time clock stamp in the Purchasing Office, or if it is not working, such time shall be determined by the Purchasing official who is to open the proposals. Faxed or e-mailed proposals are not acceptable.

Each proposal, one (1) original, marked as such and four (5) copies, marked as such, must be appropriately signed by an authorized representative of the Offeror, and must be submitted in a sealed envelope or package. The notation "**Solar Services**", **RFP No. 15-04-05** and the specified opening time and date must be clearly marked on the front of that sealed envelope or package.

The City of Roanoke, Virginia, and its officers, employees or agents will not be responsible for the opening of a proposal envelope or package prior to the scheduled opening if that envelope or package is not appropriately sealed and marked as specified.

The City of Roanoke, Virginia reserves the right to cancel this RFP and/or reject any or all proposals, to waive informalities in any proposal, to award any whole or part of a proposal, and to award to the Offeror whose proposal is, at the sole discretion of the City of Roanoke, determined to be in the best interest of the City.

Project evaluation and award will be accomplished in accordance with this RFP and Sections 23.2-1, et seq., of the Code of the City of Roanoke, Virginia, including the price or value of the benefits offered the City in the proposal. If an award of a contract is made, notification of such award will be posted for public review in the lobby on the second floor of the Noel C. Taylor Municipal Building, 215 Church Ave., SW, Roanoke, VA 24011.

No proposal may be withdrawn for a period of sixty (60) days after the opening of the proposal, unless the proposal is the subject of a clerical error as defined in Section 2.2-

4330 (A) of the Code of Virginia. The submitter of the proposal must give the City a notice of the request to withdraw within two (2) business days after the conclusion of the opening of the proposals, as set forth in Section 2.2-4330 (A) (i).

Inquires or information regarding procurement procedures and/or proposal submission to this RFP shall be directed to Simone Knowles, Purchasing Manager at (540) 853-5801.

This RFP consists of this Introduction, ten (10) numbered sections, and the attachments hereto.

If you download this RFP from the City website and intend to submit a proposal, you should notify Purchasing that you have done so. However, each Offeror is solely responsible for ensuring that such Offeror has the current, complete version of the RFP documents, including any addenda, before submitting a proposal. The City is not responsible for any RFP obtained from any source other than the City. Contact Purchasing by phone at 540-853-2871, by fax at 540-853-1513, or by email at simone.knowles@roanokeva.gov.

Respectfully,

A handwritten signature in black ink, appearing to be 'SK' followed by a long horizontal stroke.

Simone Knowles
Purchasing Manager

Date: December 9, 2014

City of Roanoke, Virginia
Request for Proposal No.15-04-05

Solar Services

SECTION 1. PURPOSE.

The purpose of this Request for Proposal (RFP) is to seek qualified Offerors to provide financing, building, ownership, operation and maintenance of solar power generation systems at one or more of these sites within the City of Roanoke: The Berglund Center (Roanoke Civic Center) located at 710 Williamson Rd.; Roanoke, Virginia 24016, The Downtown Complex which includes the Noel C. Taylor Municipal Building located at 215 Church Ave SW, Roanoke, Virginia 24011, the Roanoke City Courthouse located at 315 Church Ave SW, Roanoke, Virginia, 24011, the City Jail & Jail Annex located at 324 Campbell Ave SW, Roanoke Virginia 24016, the Roanoke City Sheriff's Department located at 330 Campbell Ave SW, Roanoke, Virginia 24011, and the Roanoke Police Department located at 348 Campbell Ave SW, Roanoke, Virginia 24016; and the Public Works Service Center located at 1802 Courtland Rd. NE, Roanoke, Virginia, 24012. The City may consider adding additional sites in the future.

The City of Roanoke invites any qualified Offeror to respond to this RFP by submitting a proposal for RFP 15-04-05 consistent with the terms and conditions herein set forth. Final scope of services will be negotiated with the successful Offeror.

SECTION 2. BACKGROUND.

The Roanoke Valley is a place of remarkable natural beauty, and the City of Roanoke takes seriously its responsibility to be good stewards of such priceless assets as our waterways, trees, and open spaces. A number of environmental initiatives by various city government departments have been underway for years. The environmentally sound practices that the City of Roanoke has adopted include a wide range of efforts in areas such as saving energy, reducing waste, preventing pollution, protecting landscapes, and planning for sustainability.

SECTION 3. INSTRUCTIONS TO OFFERORS.

- A. Proposals must be submitted in accordance with the instructions and requirements contained in this RFP, including the Introduction. Failure to do so may result in the proposal being considered non-responsive and it may be rejected. An Offeror must promptly notify the Purchasing Division of any ambiguity, inconsistency, or error which may be discovered upon examination of the RFP. An Offeror requiring clarification or interpretation of this RFP should contact the Purchasing Manager at (540) 853-2871.
- B. Prospective Offerors, sometimes referred to as providers, operators, contractors, consultants, or vendors, are to address the criteria below at a minimum as part of

their submitted proposal. Each proposal should include a transmittal letter and management overview of the proposal. Proposals are to include and may be evaluated on the following factors, together with such other factors as will protect and preserve the interests of the City of Roanoke, which may also be considered.

1. Organizational structure of firm and qualifications of management personnel.

Prospective Offerors should submit at a minimum the length of time in the business, corporate experience, strengths in the industry, business philosophy, and a description of the organizational structure of the firm; a description of the organizational structure for the management and operation of the services requested and/or provision of the items referred to in this RFP, including an organizational chart denoting all positions and the number of personnel in each position.

2. Financial condition of the firm and ability to perform all obligations of any resultant contract.

The sufficiency of the financial resources and the ability of the Offeror to comply with the duties and responsibilities described in this RFP. Each Offeror shall provide a current annual financial report and the previous year's report and a statement regarding any recent or foreseeable mergers or acquisitions.

3. Each Offeror is to state whether or not any of Offeror's owners, officers, employees, or agents, or their immediate family members, is currently, or has been in the past year, an employee of the City of Roanoke or has any responsibility or authority with the City that might affect the procurement transaction or any claim resulting therefrom. If so, please state the complete name and address of each such person and their connection to the City of Roanoke. Each Offeror is advised that the Ethics in Public Contracting and Conflict of Interests Act of the Virginia Code, as set forth in Section 4 of this RFP, apply to this RFP.

4. Experience in providing the services and/or items requested by this RFP.

5. Cost.

Prospective Offerors must submit any expected costs to the City for the required services and/or items, including all fees and costs and how they are calculated, together with all benefits and/or revenue payments they propose to make to the City if appropriate.

6. The ability, capacity, and skill of the Offeror to provide the services and/or items described in this RFP in a prompt and timely manner without delay or interference.
7. The character, integrity, reputation, judgment, experience, efficiency and effectiveness of the Offeror.
8. The quality and timeliness of performance of previous contracts or services of the nature described in this RFP.

9. Compliance by the Offeror with laws and ordinances regarding prior contracts, purchases, or services.
 10. The conditions, if any, of the proposal.
- C. Each Offeror should provide the names, addresses, and telephone numbers of at least three (3) references in connection with supplying the services or items requested in this RFP, especially from other local government operations similar to those being requested in this RFP by the City. Each reference should include organizational name, official address, contact person, title of contract, number of years in use, and phone number.
 - D. The Offeror should submit a Sample Contract for these goods and services along with their proposal. The sample contract may contain terms and conditions that the Offeror plans to include in any contract that may be awarded, but such terms and conditions may be changed, added to, deleted, or modified as may be agreed to between the City and the Offeror during negotiations.
 - E. Also include any other materials you may want to submit as part of your proposal response.
 - F. Responses to this RFP should follow the prescribed format outlined in this section.
 - G. The City may request additional information, clarification, or presentations from any of the Offerors after review of the proposals received.
 - H. The City has the right to use any or all ideas presented in reply to this RFP, subject only to the limitations regarding proprietary/confidential data of Offeror.
 - I. The City is not liable for any costs incurred by any Offeror in connection with this RFP or any response by any Offeror to this RFP. The expenses incurred by Offeror in the preparation, submission, and presentation of the proposal are the sole responsibility of the Offeror and may not be charged to the City.
 - J. Only the City will make news releases pertaining to this RFP or the proposed award of a Contract.
 - K. Each Offeror who is a stock or nonstock corporation, limited liability company, business trust, or a limited partnership or other business entity shall be authorized to transact business in the Commonwealth of Virginia as a domestic or foreign business entity if required by law. Each such Offeror shall include in its proposal response the Identification Number issued to it by the Virginia State Corporation Commission (SCC) and should list its business entity name as it is listed with the SCC. Any Offeror that is not required to be authorized to transact business in the Commonwealth as a domestic or foreign business entity as required by law shall include in its proposal response a statement describing why the Offeror is not required to be so authorized. (See Va. Code Section 2.2-4311.2).
 - L. Each Offeror is required to state if it has ever been debarred, fined, had a contract terminated, or found not to be a responsible bidder or Offeror by any federal, state, or local government, and/or private entity. If so, please give the details of each such matter and include this information with the proposal response.

SECTION 4. MISCELLANEOUS.

- A. Ownership of Material - Ownership of all data, materials, and documentation originated and prepared for the City pursuant to the RFP shall belong exclusively to the City and be subject to public inspection in accordance with the *Virginia Freedom of Information Act*. Trade secrets or proprietary information submitted by the Offeror shall not be subject to public disclosure under the *Freedom of Information Act*, unless otherwise required by law or a court. **However, the Offeror must invoke the protection of Section 2.2-4342(F) of the Code of Virginia, in writing, either before or at the time the data or other material is submitted.** The written notice must SPECIFICALLY identify the data or materials to be protected and state the reason why protection is necessary. The proprietary or trade secret material submitted must be identified by some distinct method such as highlighting or underlining and must indicate only the specific words, figures, or paragraphs that constitute trade secret or proprietary information. The classification of an entire proposal document, line item prices, and/or total proposal prices as proprietary, or trade secrets, is NOT ACCEPTABLE and may result in REJECTION of the proposal.
- B. As this is a RFP, no information regarding the proposal records or the contents of responses will be released except in accordance with Section 2.2-4342 of the Code of Virginia. Once an award has been made, all proposals will be open to public inspection subject to the provisions set forth above.
- C. Any interpretation, correction, or change of the RFP will be made by an addendum. Interpretations, corrections or changes of this RFP made in any other manner will not be binding and Offerors must not rely upon such interpretations, corrections, or changes. The City Purchasing Division or its designee will issue Addenda. Addenda will be posted on Vendor Self Service (VSS) at <https://VSS.roanokeva.gov> as well as the Purchasing Division's web page at www.roanokeva.gov/purchasing.
- D. No Offeror shall confer on any public employee having official responsibility for a purchasing transaction any payment, loan, subscription, advance, deposit or money, service, or anything of more than nominal value, present or promised, unless consideration of substantially equal or greater value is exchanged.
- E. The City may make investigations to determine the ability of the Offeror to perform or supply the services and/or items as described in this RFP. The City reserves the right to reject any proposal if the Offeror fails to satisfy the City that it is qualified to carry out the obligations of the proposed contract.
- F. The Successful Offeror must comply with the nondiscrimination provisions of Virginia Code Section 2.2-4311, which are incorporated herein by reference.
- G. The Successful Offeror must comply with the drug-free workplace provisions of Virginia Code Section 2.2-4312, which are incorporated herein by reference.

- H. It is the policy of the City of Roanoke to maximize participation by minority and women owned business enterprises in all aspects of City contracting opportunities.
- I. The Successful Offeror shall comply with all applicable City, State, and Federal laws, codes, provisions, and regulations. The Successful Offeror shall not during the performance of any resultant contract knowingly employ an unauthorized alien as defined in the federal Immigration Reform and Control Act of 1986.
- J. Providers of any outside services shall be subject to the same conditions and requirements as the successful Offeror in regards to law, code, or regulation compliance. The City reserves the right of approval for any subcontract work, including costs thereof.
- K. Ethics in Public Contracting. The provisions, requirements, and prohibitions as contained in Sections 2.2-4367 through 2.2-4377, of the Virginia Code, pertaining to bidders, offerors, contractors, and subcontractors are applicable to this RFP.
- L. Conflict of Interests Act. The provisions, requirements, and prohibitions as contained in Sections 2.2-3100, et seq., of the Virginia Code are applicable to this RFP.
- M. The procurement provisions of the Code of the City of Roanoke (1979), as amended, Sections 23.2-1, et seq., as well as the City Procurement Manual, apply to this RFP, unless specifically modified herein. The City's Procurement Manual can be reviewed at the Purchasing office.
- N. Insurance Requirements.
Successful Offeror, and any of its subcontractors, shall, at its sole expense, obtain and maintain during the life of the resulting Contract the insurance policies and/or bonds required. Any required insurance policies and/or bonds shall be effective prior to the beginning of any work or other performance by successful Offeror, or any of its subcontractors, under any resultant Contract. All such insurance shall be primary and noncontributory to any insurance or self-insurance the City may have. The policies and coverages required are those as may be referred to in the sample contract and/or the terms and conditions attached to this RFP.

SECTION 5. PROTESTS.

Any Offeror who wishes to protest or object to any award made or other decisions pursuant to this RFP may do so only in accordance with the provisions of Sections 2.2-4357, 4358, 4359, 4360, 4363, and 4364 of the Code of Virginia, and only if such is provided for in such Code section. Any such protest or objection must be in writing signed by a representative of the entity making the protest or objection and contain the information required by the applicable Code Sections set forth above. Such writing must be delivered to the City Purchasing Manager within the required time period.

SECTION 6. SERVICES AND/OR ITEMS REQUIRED.

The following are the services and/or items that the successful Offeror will be required to provide to the City and should be addressed in each Offeror's proposal.

A description and/or listing of the services and/or items that the successful Offeror will be required to provide to the City under this RFP are those that are set forth

below and/or referred to in any way in the sample contract, any terms and conditions, and/or any attachments to this RFP.

Each Offeror should carefully read and review all such items and should address such items in its proposal. However, the final description of the services and/or items to be provided to the City under this RFP is subject to negotiations with the successful Offeror, and final approval by the City.

- A. In general, the selected developer(s) will be required to develop, at no upfront cost to the City, Photovoltaic (PV) Systems at select locations within the City of Roanoke. Offerors should describe the proposed approach they will use to design, procure long-lead time equipment, construct, maintain, and commission solar power generation systems. The PV Systems should be top quality for maximum solar generation and meet "Tier 1" solar equipment specifications.
- B. Offerors should address in detail their anticipated funding for the project(s) as well as their experience with any proposed finance partners on comparable projects.
 - 1. Offerors should detail why their proposed financing plan would offer the best value to the City of Roanoke and include information on:
 - i. Price per kWh for 20 years.
 - ii. Net benefit calculation of the service, including cost avoidance amounts.
 - iii. Cost of service agreement plus any and all allowances.
 - 2. Offerors should describe the proposed financing mechanism, the source of funding, and the number of projects that the prime firm has financed using this methodology.
 - 3. Given the budgetary requirements applicable to the City of Roanoke, any financing mechanism must be structured in such a manner so that it will not be considered debt and will not qualify as a capital lease under generally accepted accounting standards.
- C. Offerors are encouraged to suggest innovative methods for interconnection agreements with the local utilities that offer cost savings and other advantages to the City without violating any federal, state, or local laws.
- D. All solar power generation systems proposed under this RFP must conform to industry best practices and applicable building and electrical codes. Each Offeror must demonstrate how their proposal will meet these technical requirements.
- E. Offerors should provide a project schedule and timetable for implementation that is complete, realistic, and with risk mitigation and escalation processes that are appropriate for the project(s).
- F. Offerors should clearly define the process, sale and ownership of any Solar Renewable Energy Credits that may be generated.
- G. Offerors should provide acceptable terms for the optional sale of the system after five (5) years and for the decommissioning and removal for all solar systems.

SECTION 7. EVALUATION CRITERIA.

Offerors will be evaluated for selection on the basis of those most qualified to meet the requirements of this RFP. Major criteria to be considered in the evaluation may include, but shall not necessarily be limited to the items referred to above and those set forth below:

- A. The background, education and experience of the Offeror in providing similar services or items elsewhere, including the level of experience in working with municipalities and the quality of services performed or items supplied. Offerors will be evaluated based on their demonstrated experience in bringing solar energy projects to commercial operations.
- B. Reasonableness/competitiveness of any proposed service agreement or fee and/or benefits to the City, although the City is not bound to select the Offeror who proposes the lowest fees or most benefits for services. The City reserves the right to negotiate fees and/or benefits to the City with the selected Offeror(s).
- C. The Offeror's responsiveness and compliance with the RFP requirements and conditions.
- D. Determination that the selected Offeror has no contractual relationships which would result in a conflict of interest with the City's contract.
- E. The Offeror's ability, capacity, and skill to fully and satisfactorily provide the services and/or items required in this RFP. Each Offeror will be evaluated based on its financial stability and ability to provide timely financing and to build, own, and operate solar power generating systems.
- F. The quality of Offeror's performance in comparable and/or similar projects.
- G. Whether the Offeror can provide the services and/or deliver the items in a prompt and timely manner.

SECTION 8. SELECTION PROCESS.

- A. Pursuant to Section 2.2-4301 (3)(b) of the Code of Virginia, selection shall be made of two or more Offerors, if there be that many, deemed to be fully qualified and best suited among those submitting proposals on the basis of the evaluation of factors included in this RFP, including price. Negotiations shall be conducted with the Offerors so selected. Price shall be considered, but need not be the sole determining factor. After negotiations have been conducted with each Offeror so selected, the City (through the City Manager or City Manager's designee) shall select the Offeror which, in his/her opinion, has made the best proposal, and may award the contract to that Offeror. The City may cancel this RFP or reject proposals at any time prior to an award, and is not required to furnish a statement of the reasons why a particular proposal was not deemed to be the most advantageous. Should the City determine in writing and in its sole discretion that only one Offeror is fully qualified, or that one Offeror is clearly more highly qualified than the others under consideration, a contract may be negotiated and awarded to that Offeror.

- B. All proposals submitted in response to this RFP will be reviewed by the Purchasing Division or its designee for responsiveness prior to referral to a selection committee or person. A committee consisting of City personnel and/or others and/or an appropriate individual will then evaluate all responsive proposals, conduct the negotiations, and make recommendations to the City Manager, or the City Manager's designee, as appropriate. The award of a contract, if made, will be made to the Offeror whose proposal best furthers the interest of the City, as determined by the City Manager, or the City Manager's designee. The City reserves the right to reject any and all proposals, to waive any informality or irregularity in the proposals received, and to make the award to the Offeror whose proposal is deemed to be in the best interest of the City.
- C. Oral Presentation: Offerors who submit a proposal in response to this RFP may be required to give an oral presentation of their proposal to the selection committee or person. This provides an opportunity for the Offeror to clarify or elaborate on the proposal. This is a fact finding and explanation session only and does not include negotiation. Oral presentations are strictly at the option of the City and may or may not be conducted.

SECTION 9. COOPERATIVE PROCUREMENT.

The procurement of goods and/or services provided for in this Contract is being conducted pursuant to Virginia Code Section 2.2-4304 and on behalf of other public bodies in Virginia. Unless specifically prohibited by the Awarded Offeror, any resultant contract may be used by other public bodies in Virginia as allowed by Section 2.2-4304. The Awarded Offeror shall deal directly with each public agency or body seeking to obtain any goods and/or services pursuant to this Contract or from this procurement and in accordance with Virginia Code Section 2.2-4304. The City of Roanoke shall not be responsible or liable for any costs, expenses, or any other matters of any type to either the Contractor or the public agency or body seeking to obtain any goods and/or services pursuant to this cooperative procurement provision.

SECTION 10. INSURANCE REQUIREMENTS.

The Contractor shall comply with the insurance requirements set forth in the Contract, including the items set forth below:

- A. Neither the Contractor nor any subcontractor shall commence work under this Contract until the Contractor has obtained and provided proof of the required insurance coverages to the City, and such proof has been approved by the City. The Contractor confirms to the City that all subcontractors have provided Contractor with proof of such insurance, or will do so prior to commencing any work under this Contract.
- B. Contractor, including all subcontractors, shall, at its and/or their sole expense, obtain and maintain during the life of this Contract the insurance policies and/or coverages required by this section. The City and its officers, employees, agents, assigns, and volunteers shall be added as an additional insured to the general liability and

automobile coverages of any such policies and such insurance coverages shall be primary and noncontributory to any insurance and/or self-insurance such additional insureds may have. The Contractor shall immediately notify in writing the City of any changes, modifications, and/or termination of any insurance coverages and/or policies required by this Contract. The Contractor shall provide to the City with the signed Contract an Acord certificate of insurance which states in the description of operations section one of the two paragraphs below:

- (1) The City and its officers, employees, agents, assigns, and volunteers are additional insureds as coverage under this policy includes ISO endorsement CG 20 33 which provides that the insured status of such entities is automatic if required by a contract or a written agreement. (If additional insured status is automatic under a different coverage form, Contractor must attach a copy of the coverage form to its certificate. Any required insurance policies shall be effective prior to the beginning of any work or other performance by Contractor and any subcontractors under this Contract).

OR

- (2) ISO endorsement CG 20 10 will be issued, prior to the beginning of any work or other performance by Contractor under this Contract, to the City and its officers, employees, agents, assigns, and volunteers naming them as an additional insured under the general liability coverage. (A copy of the binder confirming the issuance must be attached to the certificate. Any required insurance policies shall be effective prior to the beginning of any work or other performance by Contractor and any subcontractors under this Contract).

However, if B (1) or (2) cannot be provided, the City's Risk Manager, in such Manager's sole discretion, may approve such other certificate of insurance or insurance document(s) that the Risk Manager deems acceptable. The City of Roanoke shall also be named as the Certificate Holder.

- C. The minimum insurance policies and/or coverages that shall be provided by the Contractor, including its subcontractors, include the following:

- (1) Commercial General Liability: \$5,000,000.00

\$5,000,000.00 General Aggregate Limit (other than Products/Completed Operations).

\$5,000,000.00 Products/Completed Operations Aggregate Limit.

\$5,000,000.00 Personal Injury Liability (including liability for slander, libel, and defamation of character).

\$5,000,000.00 each occurrence limit

- (2) Automobile Liability: \$1,000,000.00 combined single limit with applicable endorsement to cover waste cargo, if transporting hazardous materials.

- (3) Workers' Compensation and Employer's Liability:

Workers' Compensation: statutory coverage for Virginia

Employer's Liability:

\$100,000.00 Bodily Injury by Accident each occurrence

\$500,000.00 Bodily Injury by Disease Policy Limit.

\$100,000.00 Bodily Injury by Disease each employee.

- (4) The required limits of insurance for this Contract may be achieved by combining underlying primary coverage with an umbrella liability coverage to apply in excess of the general and automobile liability policies, provided that such umbrella liability policy follows the form of the underlying primary coverage.
- (5) Such insurance policies and/or coverages shall provide for coverage against any and all claims and demands made by a person or persons or any other entity for property damages or bodily or personal injury (including death) incurred in connection with the services, work, items, and/or other matters to be provided under this Contract with respect to the commercial general liability coverages and the automobile liability coverages. With respect to the workers' compensation coverage, Contractor's and its subcontractors' insurance company shall waive rights of subrogation against the City and its officers, employees, agents, assigns, and volunteers.
- (6) Contractor shall provide such other insurance policies and/or coverages that may be required by other parts of this Contract. If required by the Contract, such policies and/or coverages could include, but are not limited to, Errors and Omissions/Professional Liability, Crime/ Fidelity, Environmental and/or Pollution, Builder's Risk, Umbrella/Excess.
- (7) Should any required insurance coverage be canceled or materially altered before the expiration term of the contract, it is the responsibility of the contractor to notify the City of such within thirty (30) days of the effective date of the change.

D. Proof of Insurance Coverage:

- (1) Contractor shall furnish the City with the above required certificates of insurance showing the type, amount, effective dates, and date of expiration of the policies.
 - (2) Where waiver of subrogation is required with respect to any policy of insurance required under this Section, such waiver shall be specified on the certificate of insurance.
- E. Insurance coverage shall be in a form and with an insurance company approved by the City, which approval shall not be unreasonably withheld. Any insurance company providing coverage under this Contract shall be authorized to do business in the Commonwealth of Virginia.
- F. The Contractor's insurance policies and/or coverages shall not contain any exclusions for the Contractor's subcontractors.
- G. The continued maintenance of the insurance policies and coverages required by the Contract is a continuing obligation, and the lapse and/or termination of any such policies or coverages without approved replacement policies and/or coverages being obtained shall be grounds for termination of the Contractor for default.
- H. Nothing contained in the insurance requirements is to be construed as limiting the liability of the Contractor, and/or its subcontractors, or their insurance carriers. The City does not in any way represent that the coverages or the limits of insurance specified are sufficient or adequate to protect the Contractor's interest or liabilities, but are merely minimums. The obligation of the Contractor, and its subcontractors, to purchase insurance shall not in any way limit the obligations of the Contractor in the event that the City or any of those named above should suffer any injury or loss in excess of the amount actually recoverable through insurance. Furthermore, there is no requirement or obligation for the City to seek any recovery against the Contractor's insurance company before seeking recovery directly from the Contractor.

SECTION 11. INFORMATION ON CONTRACT TO BE AWARDED.

The Offeror should submit a Sample Contract for these goods and services along with their proposal. The sample contract may contain terms and conditions that the Offeror plans to include in any contract that may be awarded, but such terms and conditions may be changed, added to, deleted, or modified as may be agreed to between the City and the Offeror during negotiations.

END

ATTACHMENT A

TO

**RFP # 15-04-05
SOLAR SERVICES**

CGIT SOLAR ROANOKE DOCUMENTATION

(12Pages)

CGIT Solar Roanoke Documentation

October 9, 2014

Joe Lauterio

jlauterio@vt.edu

Objective

To find the suitability of some buildings in Roanoke for solar energy.

List given for study:

CITY OF ROANOKE ACCOUNT NUMBERS - AEP		
Facility	Address	Sq Ft
Municipal South	215 W Church, Rke 24011	70,000
Municipal North	215 W Church, Rke 24011	47,050
Roanoke Civic Center	710 Williamson Rd Rke 24016	391,300
Public Works Service Center	1802 Courtland Rd, Rke 24012	67,850
Roanoke City Police Building	310 Campbell Ave, Rke 24011	64,900
Roanoke City Sheriff's Office	330 Campbell Ave Rke 24011	6,443
City Jail	324 Campbell Ave Rke 24011	141,050
Courthouse	315 Church Ave Rke 24011	109,100
Fire station #1	704 Franklin Rd Rke 24011	20,050
Fire station #2	55 Noble St Rke 24016	11,100
Fire station #3	4803 Williamson Rd Rke 24012	8,350
Fire station #5	1920 Orange Ave Rke 24016	19,400
Fire station #11	1502 Riverland Rke 24013	4,700
Fire station #13	4330 Appleton Ave Rke 24017	6,500
Fire station #14	1000 Mecca St NE Rke 24012	6,900
Market Square Parking Garage	15 Campbell Ave Rke 24011	99,935
Gainsboro Parking Garage	25 Shenandoah Ave Rke 24106	129,052
Century Parking Garage	25 Church Ave Rke 24011	166,200
Church Ave Parking Garage	121 Church Ave SW, Rke 24011	301,957
Tower Garage	10 S Jefferson Rke 24011	251,169
Williamson Rd Garage	201 Tazewell Ave SE Rke 24011	
Eureka Park Center	1529 Carroll Ave Rke, 24017	10,500
Grandin Court Center	2621 Barham Rd Rke, 24016	2,700
Preston Parks Center	3137 Preston Ave Rke 24012	3,250
Villa Heights Center	2750 Clifton Ave NW Rke 24017	5,204
Garden City Center	3800 Yellow Mountain Rd, Rke 24014	7,150
Williamson Rd Library	3837 Williamson Rd 24012	6,100

Melrose Library	2607 Salem Turnpike Rke 24017	6,800
Gainsboro Library	15 Patton Ave Rke, 24016	9,100
Jackson Park Library	1030 Morningside Ave, Rke 24013	7,600
Main Library	706 S Jefferson Rke 24016	59,400
Raleigh Court Library	2122 Grandin Rd Rke 24015	6,100

Data Sources

- buildings.shp - obtained from <ftp://ftp.roanokeva.gov/GIS/Shapefiles/> on 9/17/2014
- Addresses.shp - obtained from <ftp://ftp.roanokeva.gov/GIS/Shapefiles/> on 9/17/2014
- Roanoke LiDAR (ZLAS)
 - roan3 & roan6
 - GCS_North_American_1983_HARN
- World_Imagery - obtained via ArcGIS http://goto.arcgisonline.com/maps/World_Imagery

Analysis

1. Data was first obtained and the given buildings of interest were matched to their corresponding building footprint in buildings.shp. Addresses.shp and Google Maps were used in this process. Issues with this are listed as follows:
 - 'Municipal South' and 'Municipal North' are the same building
 - 'Roanoke Civic Center' is larger than give footprints
 - 'Public Works Service Center' includes multiple buildings
 - 'City Jail' has an annex which is included
 - 'Fire station #3' does not have a footprint, I made one from aerial photo
 - 'Fire station #5' does not have a footprint, I made one from aerial photo
 - What was listed as 'Market Square Parking Garage' seems to be 'Center in the Square Garage'
 - 'Tower Garage' footprint includes the tower. It has been modified to exclude it.
 - 'Williamson Rd Garage' seems to be 'Elmwood Parking Garage'
 - 'Gainsboro Library' seems to be larger than the given footprint
 - 'Jackson Park Library' seems to be larger than the given footprint
2. For the analysis of the LiDAR data tools from <http://rapidlasso.com/> were first considered. The tools do not seem to do batch generation and for the individual output it puts intentionally marks with black diagonals, due to not being licensed. Instead the LAS Dataset to Raster ArcGIS native tool was used to make a DEM, with the following parameters:

```
value_field="ELEVATION"
interpolation_type="BINNING AVERAGE LINEAR"
```



```
data_type="FLOAT"
sampling_type="CELLSIZE"
sampling_value="1"
z_factor="1"
```

3. The **Area Solar Radiation (Spatial Analyst)** tool was then used with the previous DEM to generate the solar maps of global radiation and direct duration. The analysis was done on individual subsets of the DEM due to computing restrictions. Each subset is a rectangle that is large enough to cover 100m around each building footprint. This means that distant features such as the nearby mountains did not feature in this analyst.

The following parameters are used for the tool:

Parameter	Value
Sky size / Resolution	400
Time configuration	WholeYear 2014
Day interval	14
Hour interval	0.25
Create outputs for each interval	false
Z factor	1
Slope and aspect input type	FROM_DEM
Calculation directions	64
Zenith divisions	16
Azimuth divisions	16
Diffuse model type	UNIFORM_SKY
Diffuse proportion	0.3
Transmittivity	0.5

The question of Transmittivity

A local transmittivity value was sought for this tool. It seems that it is not obtainable other than with a on the spot measurement. The default value was used (0.5).

4. Due to problems with the LiDAR quality, the following requested buildings were not able to be generated (they are the missing page numbers):
 - Fire station #11
 - Preston Parks Center
 - Fire station #13
 - Grandin Court Center
 - Fire station #3
5. The output maps present the square footage and the address of the location given which may conflict with those listed at <http://www.roanokeva.gov>.

Other Estimates

- <http://pvwatts.nrel.gov/index.php> - Can generate a monthly kWh/m²/day solar ration with an estimate energy value.
- The National Renewable Energy Laboratory (NREL) has spatial data on solar resource potentials. They have an interactive map at <http://maps.nrel.gov/prospector>. The GIS data is available at http://www.nrel.gov/gis/data_solar.html.

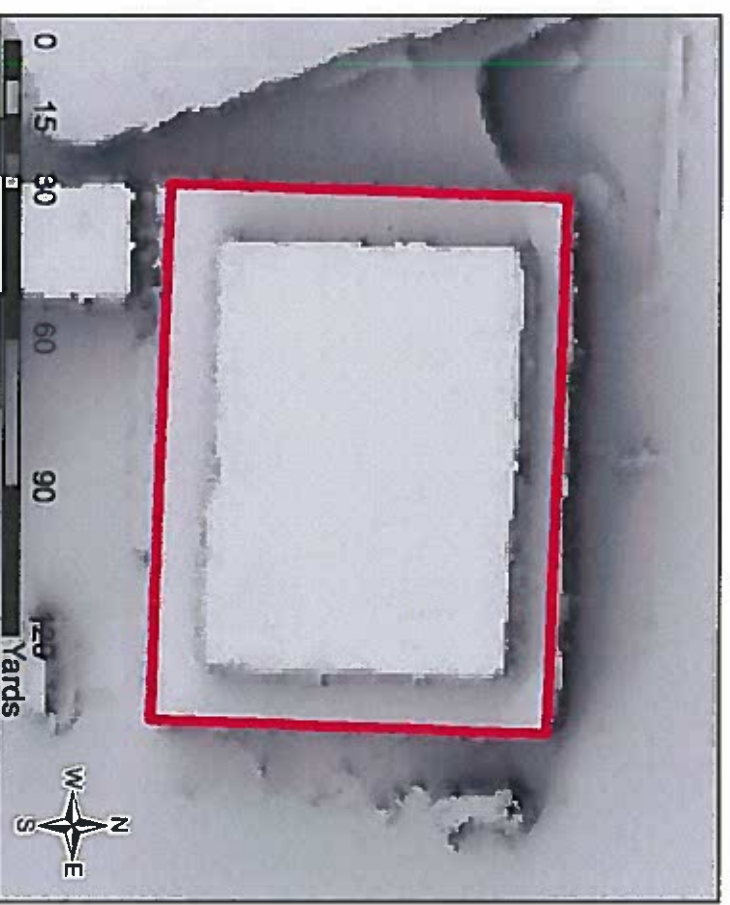
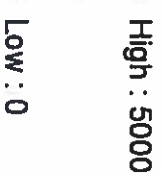
391,300 Sq. Ft.

1500000

[illegible]

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Hours a year

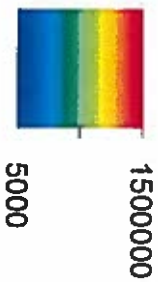


Municipal Building

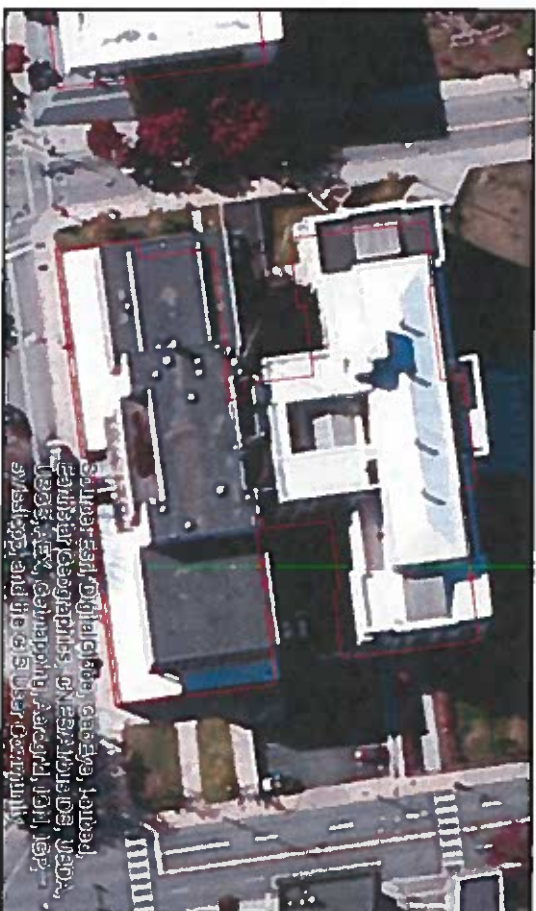
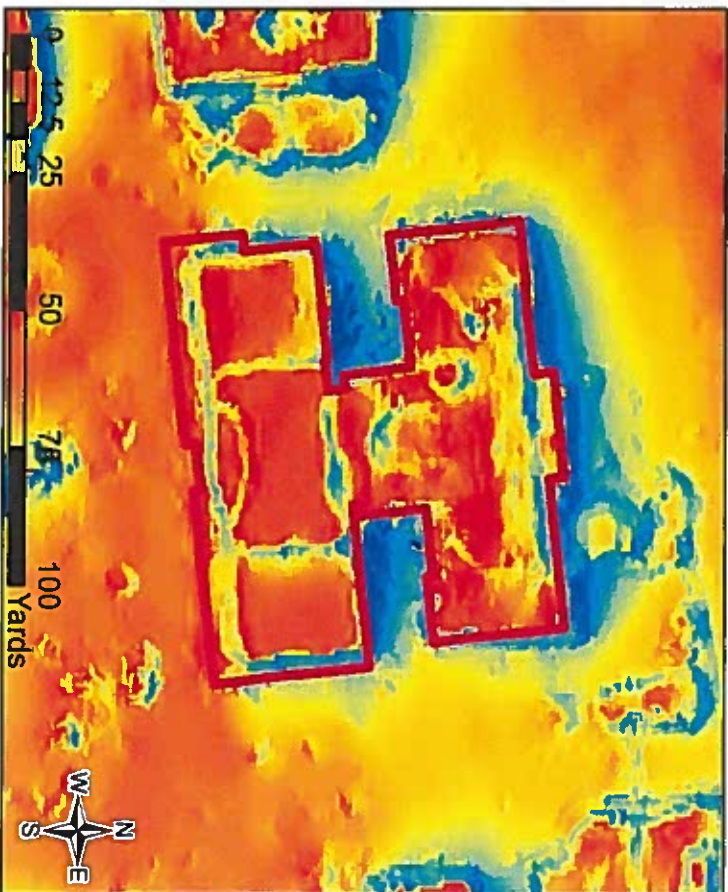
215 W Church, Roanoke 24011

117,050 Sq. Ft.

WH/m2



Global Radiation

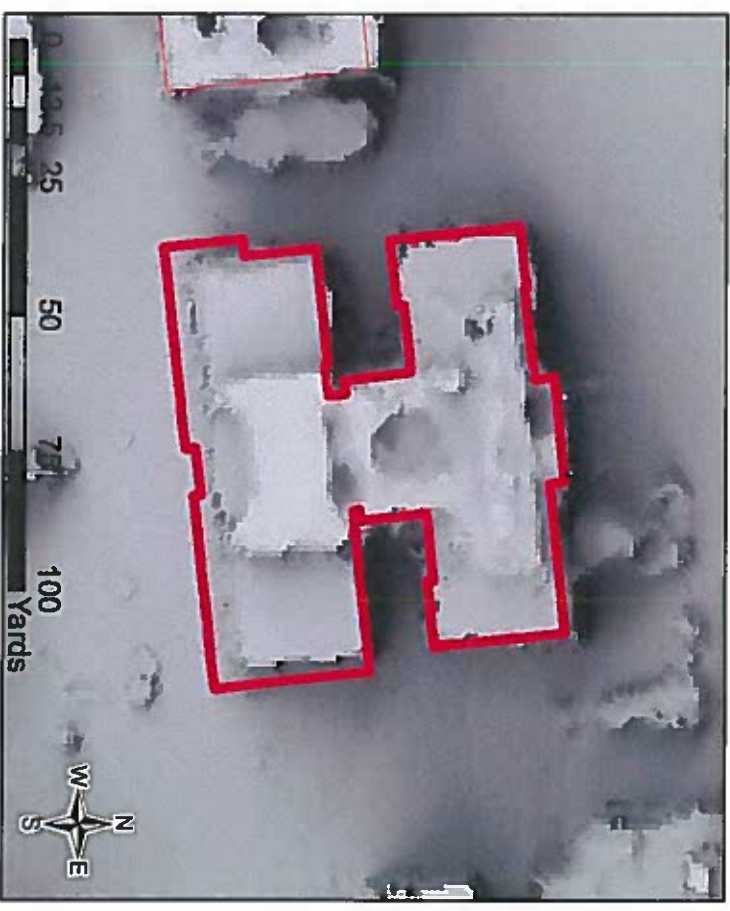


Direct Duration

Hours a year



CGIT 10/9/2014

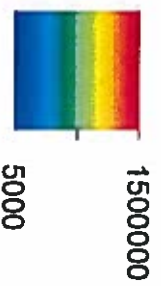


Courthouse

315 Church Ave., Roanoke 24011

109,100 Sq. Ft.

WH/m²



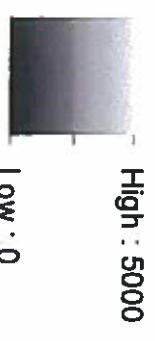
Global Radiation



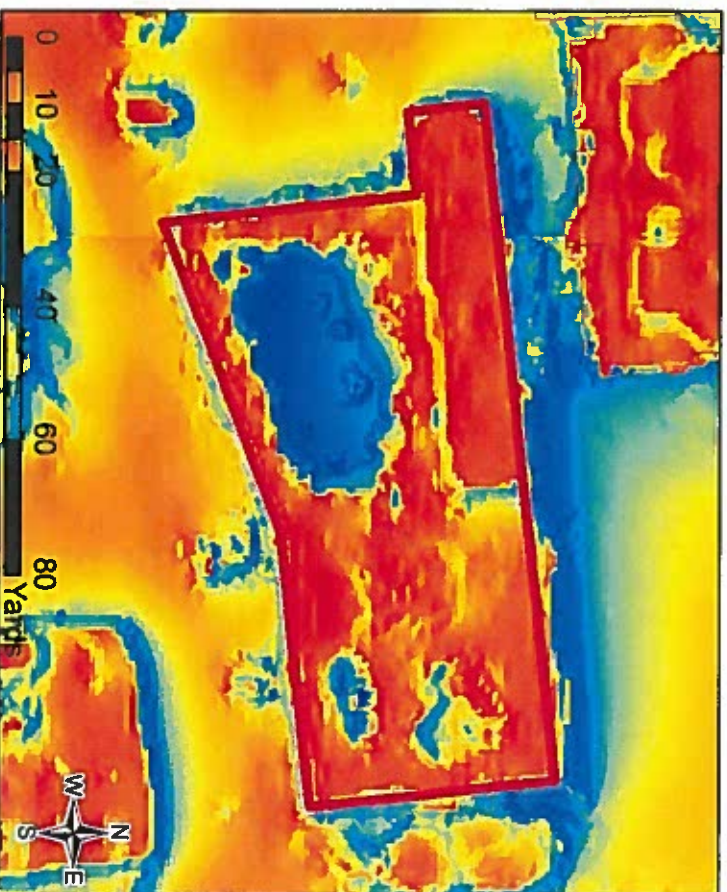
Source: Esri, DigitalGlobe, GeoEye, iSat, Earthstar Geographics, CNES/Airbus DS, USDA, AeroGRID, IGN, SDA, Index, NAIP, Imagery, 2011, 2010, 2009, 2008, 2007, 2006, 2005, 2004, 2003, 2002, 2001, 2000, 1999, 1998, 1997, 1996, 1995, 1994, 1993, 1992, 1991, 1990, 1989, 1988, 1987, 1986, 1985, 1984, 1983, 1982, 1981, 1980, 1979, 1978, 1977, 1976, 1975, 1974, 1973, 1972, 1971, 1970, 1969, 1968, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1959, 1958, 1957, 1956, 1955, 1954, 1953, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1943, 1942, 1941, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1922, 1921, 1920, 1919, 1918, 1917, 1916, 1915, 1914, 1913, 1912, 1911, 1910, 1909, 1908, 1907, 1906, 1905, 1904, 1903, 1902, 1901, 1900, 1899, 1898, 1897, 1896, 1895, 1894, 1893, 1892, 1891, 1890, 1889, 1888, 1887, 1886, 1885, 1884, 1883, 1882, 1881, 1880, 1879, 1878, 1877, 1876, 1875, 1874, 1873, 1872, 1871, 1870, 1869, 1868, 1867, 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CGIT 10/9/2014

Hours a year



Direct Duration

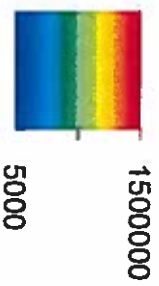


City Jail

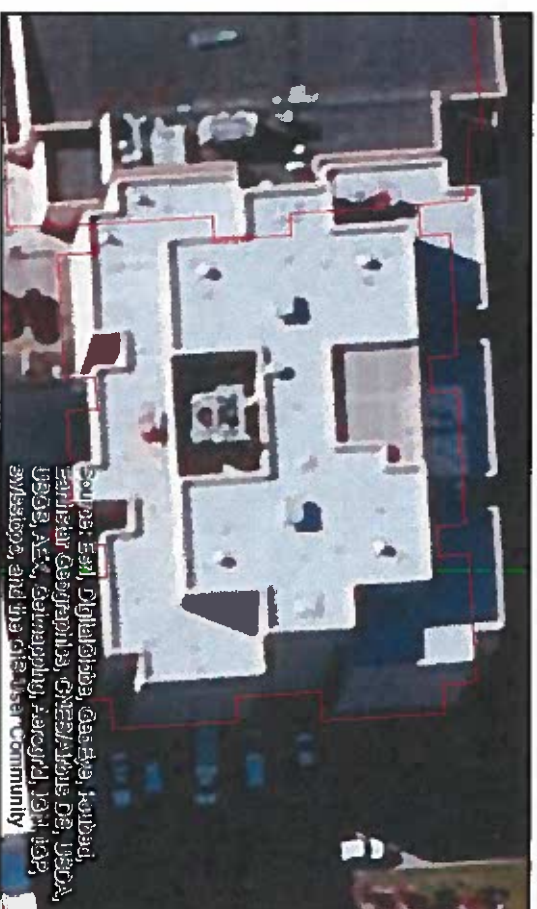
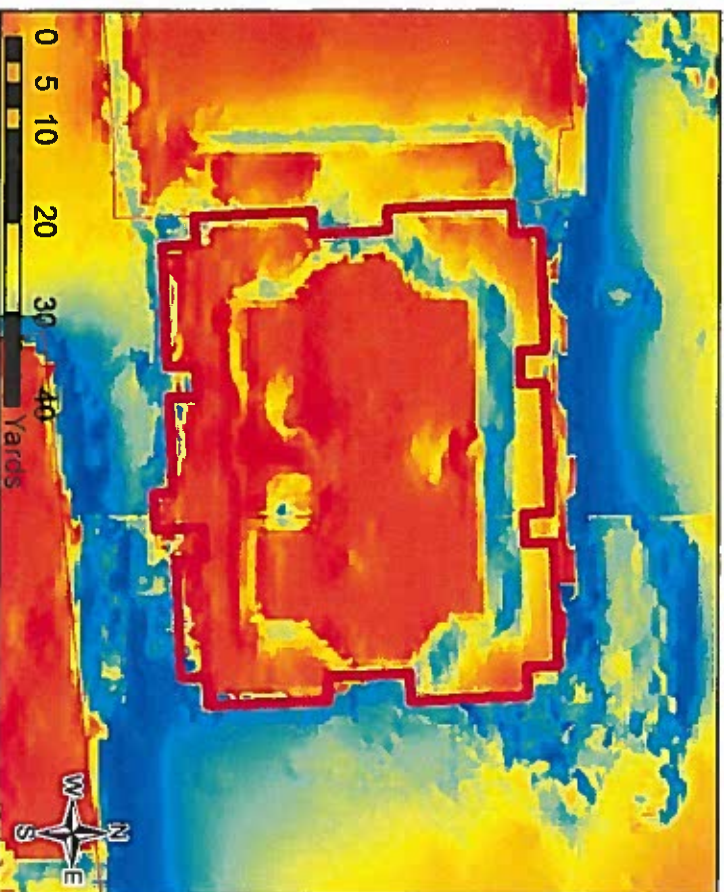
324 Campbell Ave., Roanoke 24011

141,050 Sq. Ft.

WH/m²



Global Radiation

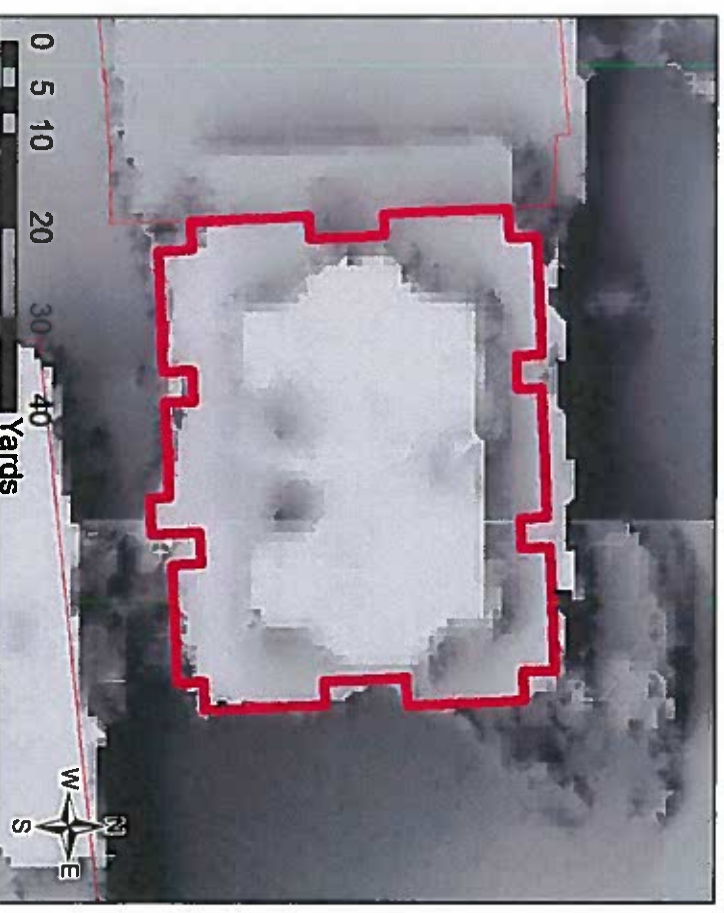


CGIT 10/9/2014

Hours a year



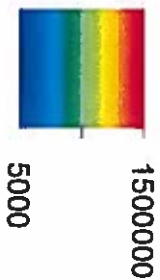
Direct Duration



Jail Annex

Sq. Ft.

WH/m²



Global Radiation

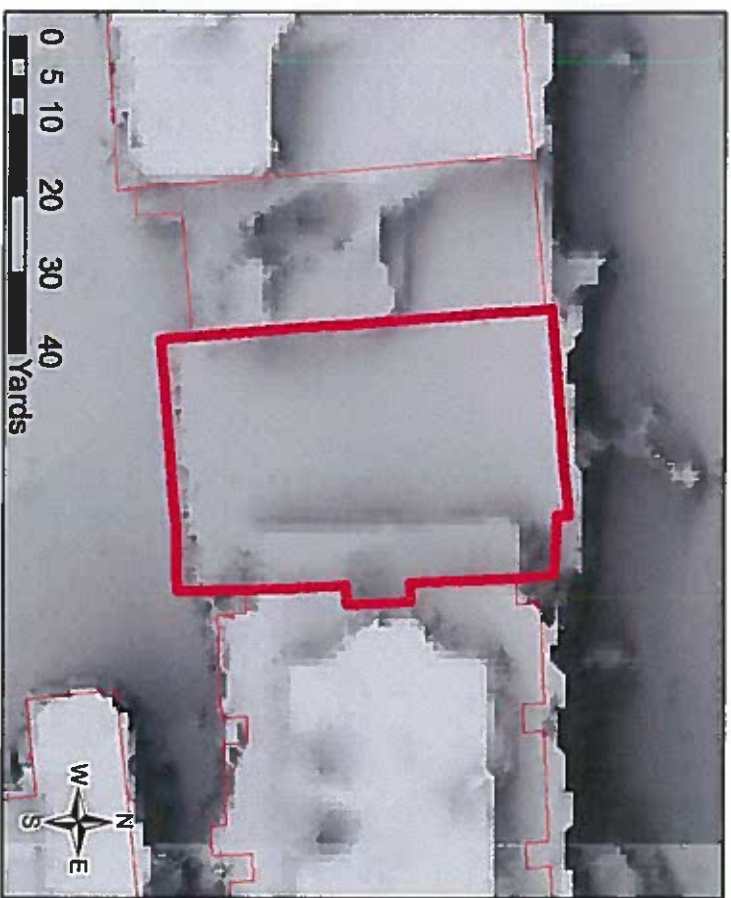
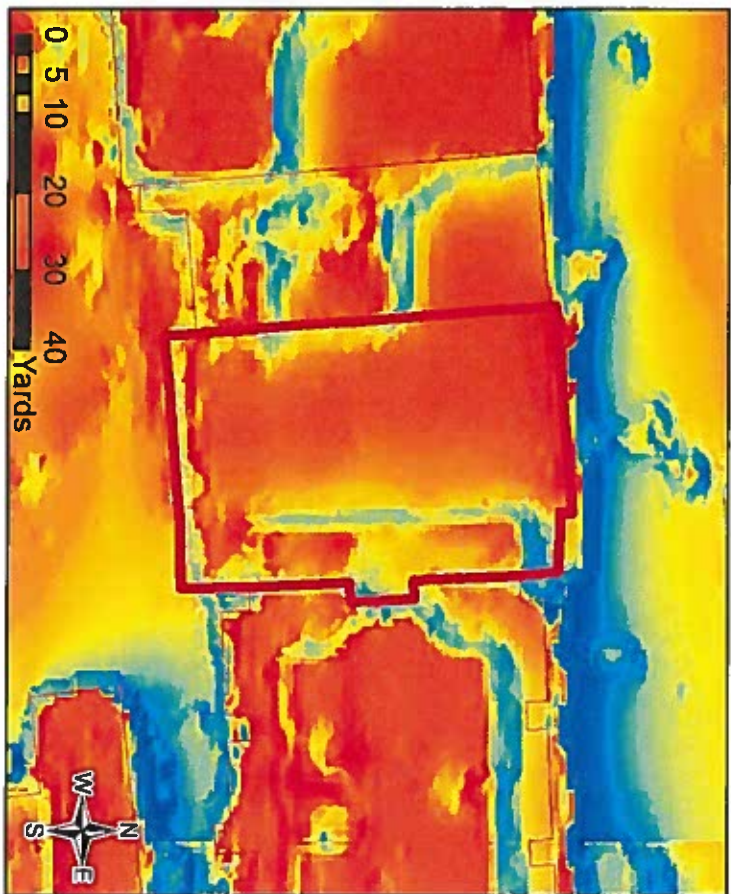


CGIT 10/9/2014

Hours a year



Direct Duration

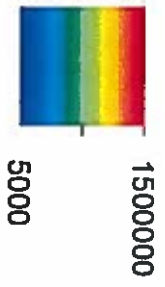


Public Works Service Center

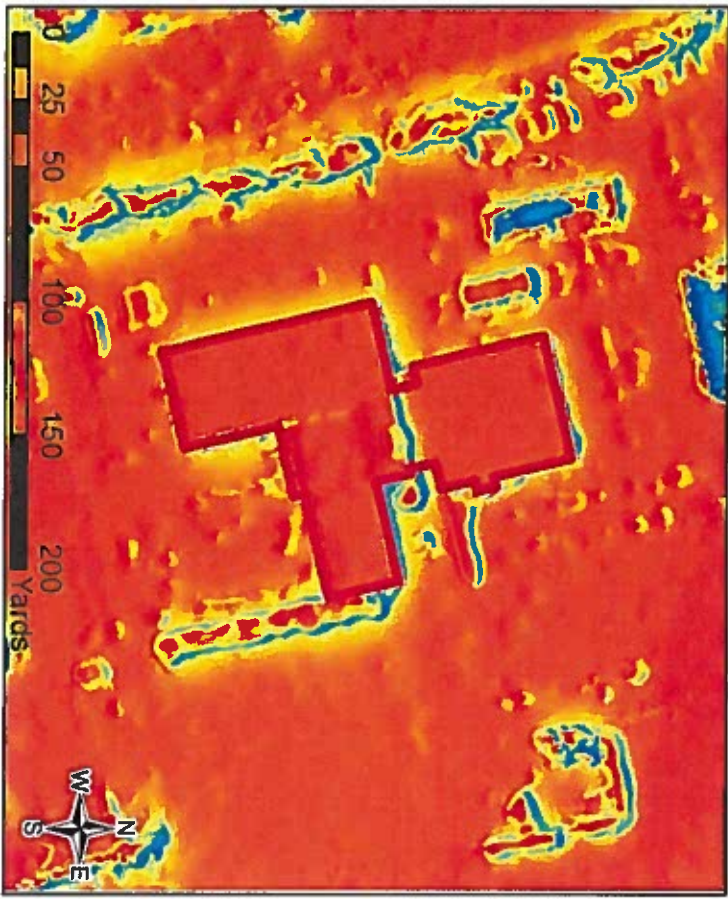
1802 Courtland Rd, Roanoke 24012

67,850 Sq. Ft.

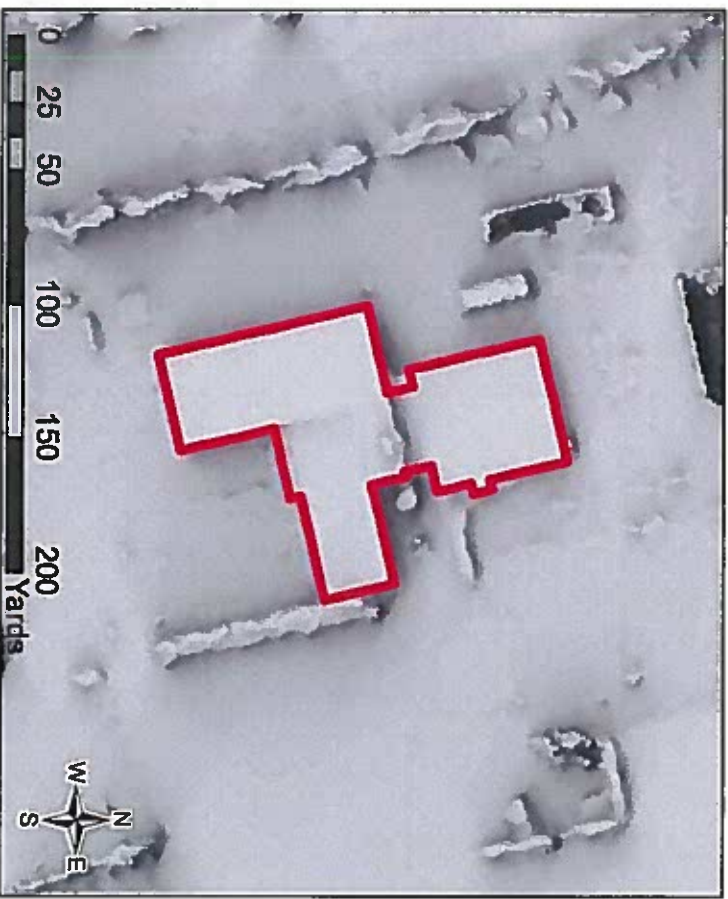
WH/m²



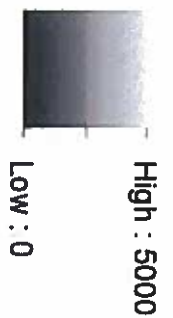
Global Radiation



Direct Duration



Hours a year



CGIT 10/9/2014